

Work Order ID 161898***161898***

Page 1

Tuesday, May 23, 2017 11:00:52 AM

Item ID: D4918-3 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Wearplate Center Fwd
Start Date: 6/8/2017 Start Qty: 8.00 ***8*** Cust Item ID:
Required Date: 6/16/2017 Req'd Qty: 8.00 ***8*** Customer:
Reference:

Approvals: Process Plan: PA: DAS 21 9-25 Date: 20170523 Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D4918	B								

100

0.00

100

FLOW WATER JET

Waterjet

Memo

1.19

FLOW CNC Waterjet

1-Cut as per Dwg

Dwg Rev: BProg Rev: B

2-Deburr if necessary

(8)

2017/06/03

110

0.00

110

QC2- Inspect parts off machine FAI/FAIB

QC

Memo

0.08

Quality Control

(8)

2017/06/03

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval																																																									
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Root Cause		FAULT CATEGORY																																																															
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER :			
Misidentified ☐	Past Due ☐																																																																

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Required Date: 6/16/2017 Req'd Qty: 8.00

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Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

120

QC8- Inspect parts - second check

0.00

120

QC

Memo

0.16

Quality Control

DAS
38
9-89

JUN 05 2017

130

NC BRAKE

0.33

130

Brake NC

Memo

1.50

Brake NC

1-Form on brake using DT8326 and DT8261 as per Dwg

2-Form joggle as per Dwg Using DT8158

DAS
30
9-89

8x

DAS
36
9-89DAS
38
9-89

JUN 06 2017

140

QC5- Inspect part completeness to step on W/O

0.00

140

QC

Memo

0.16

Quality Control

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WORK ORDER NON-CONFORMANCE / UPDATE



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Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐				
OTHER :									

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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

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Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150		0.00							
150						<u>8</u>			DAS
SprayPaint	Memo	0.00							41
Spray Painting	APPLY COATING ON CONCAVE SURFACE AS PER DWG AND QSI005 (SEE NOTE 8 ON DWG) BATCH: <u>137676</u>								9-89
									JUN 08 2017
160	QC5- Inspect part completeness to step on W/O	0.00							
160						<u>8</u>			PD
QC	Memo	0.08							JUN 09 2017
Quality Control									
170	Identify as per dwg & Stock Location: <u>FP-002</u>	0.00							
170						<u>x8</u>	<u>d</u>	<u>17/06/12</u>	
Packaging	Memo	0.08							
Packaging	LOCATION : FP002								

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180	QC21- Final Inspection - Work Order Release	0.00							
180									
QC	Memo	0.80							
Quality Control									

DAS
21
9-89

JUN 12 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
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Picklist Print

Tuesday, May 23, 2017 11:00:50 AM

Page 1

Work Order ID: 161898

161898

Parent Item: D4918-3

D4918-3

Parent Item Name: Wearplate Center Fwd

Start Date: 6/8/2017

Required Date: 6/16/2017

Start Qty: 8.00

Required Qty: 8.00

Comments: IPP REV:A 13.12.09 NEW ISSUE DD VERF:JFS

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304S20GA		Purchased				100	sf	185.8300	0.774	6.517895			

M304S20GA

304/316 .040 Sheet

**

DL17/06/23

Location

Loc Qty

Loc Code

MAT020

185.83

m136327

3.15

m136568

3.78

m137263

50.9

m137362

64

m137513

64

6.6

DQA: _____ Date: _____

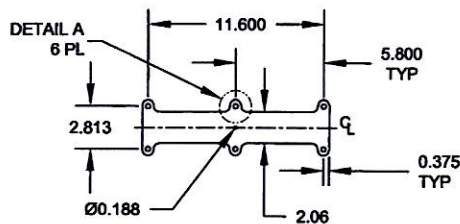
WORK ORDER NON-CONFORMANCE / UPDATE



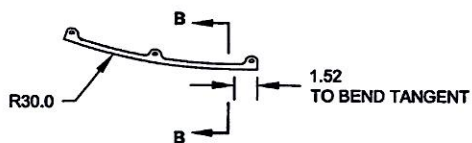
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Work Order update only ☐

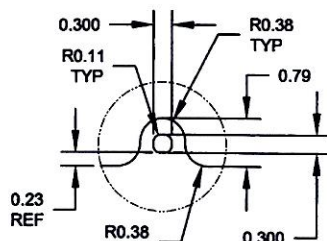
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Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐																																																																						
Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐																																																																						
OTHER : ☐																																																																									



D4918-1F WEARPLATE
FLAT PATTERN



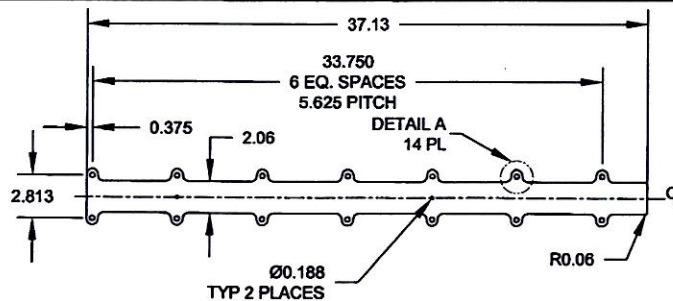
D4918-1 BENDING DETAIL
MAKE FROM D4918-1F



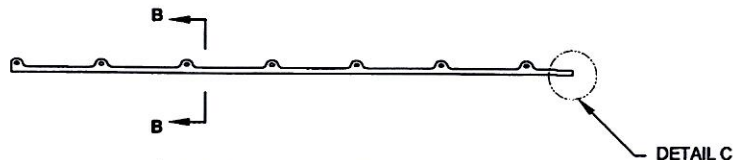
DETAIL A
SCALE 2X

NOTES:

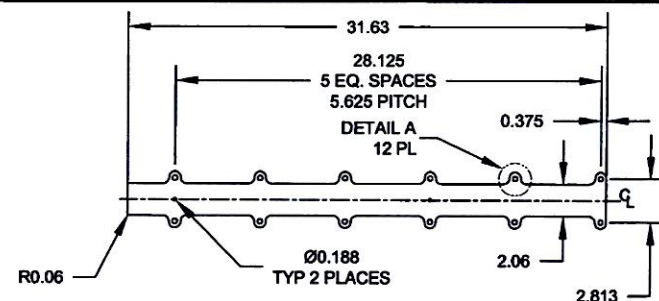
- 1) MATERIAL: AISI 304/316 SS SHEET ANNEALED PER MIL-S-5059 OR AMS 5513 OR AMS 5524, OR ASTM A240 OR ASME SA240 20 GAUGE (0.038 THICK)
REF. DART MATERIAL SPEC M304S20GA
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N PER QSI 044 6.1
- 7) WEIGHT: D4918-1 - 0.47 LBS, D4918-3 - 0.95 LBS, D4918-5 - 0.77 LBS,
- 8) COAT ENTIRE TOP (CONCAVE) SURFACE WITH TEXTURED COATING 0.020-0.040 THICK, PER DART QSI 005 4.9



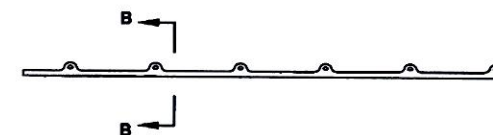
D4918-3F WEARPLATE
FLAT PATTERN



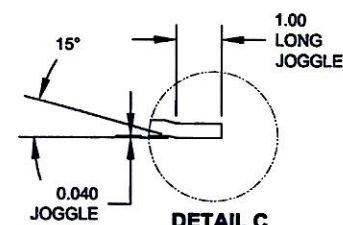
D4918-3 BENDING DETAIL
MAKE FROM D4918-3F



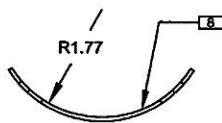
D4918-5F WEARPLATE
FLAT PATTERN



D4918-5 BENDING DETAIL
MAKE FROM D4918-5F



DETAIL C
SCALE 3X



SECTION B-B
SCALE 2X

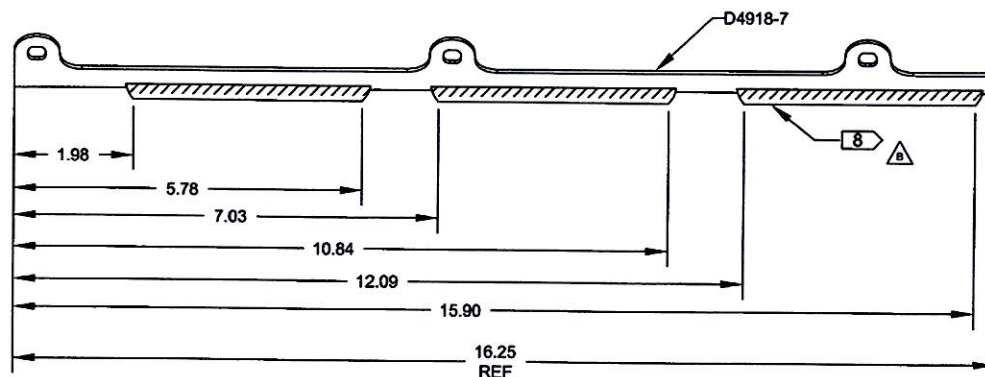
SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 161218

PA 20170523

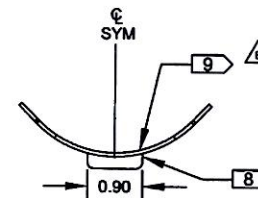
RELEASED
2017-04-12
ECN 17-554

B	CHANGE NOTE OF SURFACE COATING FROM ROCKGUARD TO TEXTURED COATING, WELDING NOTES UPDATED, REVISE DRAWING TO CURRENT STANDARDS, ADDED NOTCHES TO ENDS OF D4918-7F	SAD	17.02.14
A	NEW ISSUE	DW	13.08.30
REV.	DESCRIPTION	BY	DATE
DESIGN	DW	DART AEROSPACE USA, INC	
DRAWN	SAD	EUGENE, OR	
CHECKED	Mee	DRAWING NO.	REV. B
MFG. APPR.	M	D4918	SHEET 1 OF 3
APPROVED	M	TITLE	SCALE
DE APPR.	M	WEARPLATE	NTS
DATE	17.02.14	COPYRIGHT © 2007 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR DISSEMINATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

ITEM	QTY -047	P/N	DESCRIPTION
	X	D4918-047	WEARPLATE
1	1	D4918-7	WEARPLATE
2	A/R	8259 OR 2059B	HARDCOAT (AUTOMATED) HARDCOAT (MANUAL)



D4918-047 WEARPLATE
MAKE FROM D4918-7

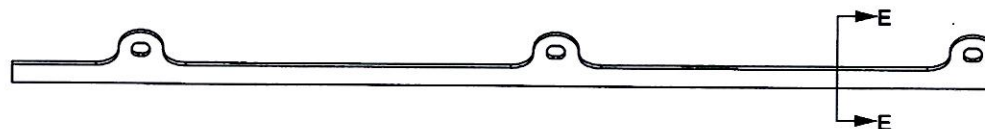


NOTES:

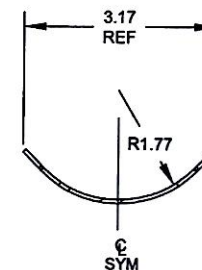
- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4918-047" PER QSI 044 6.1
- 7) WEIGHT: 2.18 lbs
- 8) APPLY 2 LAYERS OF HARD SURFACING WELD BEAD 0.19 TO 0.25 THICK USING 8259 ROD PER QSI 004 SECTION 4.5 (AUTOMATED WELDING) OR APPLY 2 LAYERS OF HARD SURFACING WELD BEAD 0.19 TO 0.25 THICK USING 2059B ROD PER QSI 004 SECTION 4.1 (MANUAL WELDING)
- 9) COAT ENTIRE TOP (CONCAVE) SURFACE WITH TEXTURED COATING 0.020-0.040 THICK PER QSI 005 4.9

RELEASED
2017-04-12

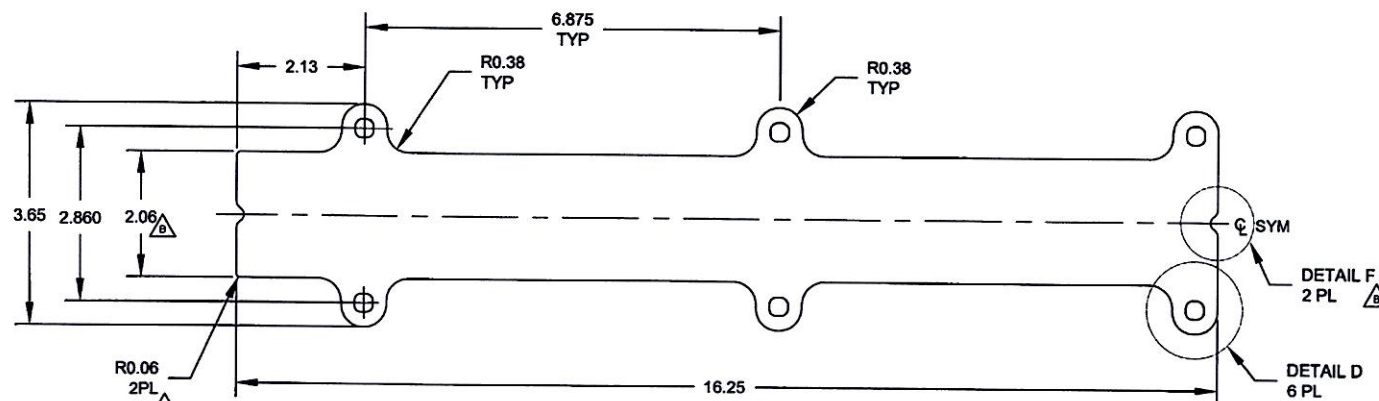
DESIGN	DW	DART AEROSPACE USA, INC	
DRAWN	SAD	EUGENE, OR	
CHECKED	<i>M4</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>[Signature]</i>	D4918	SHEET 2 OF 3
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	WEARPLATE	NTS
DATE	17.02.14	COPYRIGHT © 2007 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	



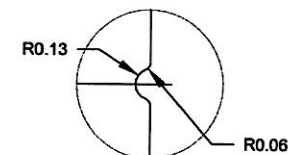
D4918-7 WEARPLATE
MAKE FROM D4918-7F



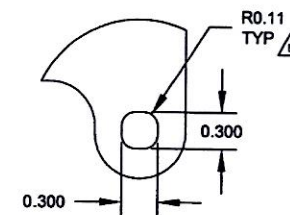
SECTION E-E
SCALE 2X



D4918-7F WEARPLATE
FLAT PATTERN



DETAIL F
SCALE 2X



DETAIL D
SCALE 2X

NOTES:

- 1) MATERIAL: AISI 304/316 SS SHEET ANNEALED PER MIL-S-5059 OR AMS 5513
OR AMS 5524 OR ASTM A240 OR ASME SA240
16 GAUGE (0.063 THICK)
(REF. DART SPEC. M304S16GA)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.66 lbs

RELEASED
2017-04-12

DESIGN	DW	DART AEROSPACE USA, INC	
DRAWN	SAD	EUGENE, OR	
CHECKED	<i>M. Lee</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>A</i>	D4918	SHEET 3 OF 3
APPROVED	<i>Ch</i>	TITLE	SCALE
DE APPR.	<i>A</i>	WEARPLATE	NTS
DATE	17.02.14	COPYRIGHT © 2007 BY DART AEROSPACE USA, INC	
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